Standard “Best-Practice” Camera Settings for Aerial Photography

The objective is to freeze ground motion by setting a fast shutter speed over typically brightly-illuminated targets.

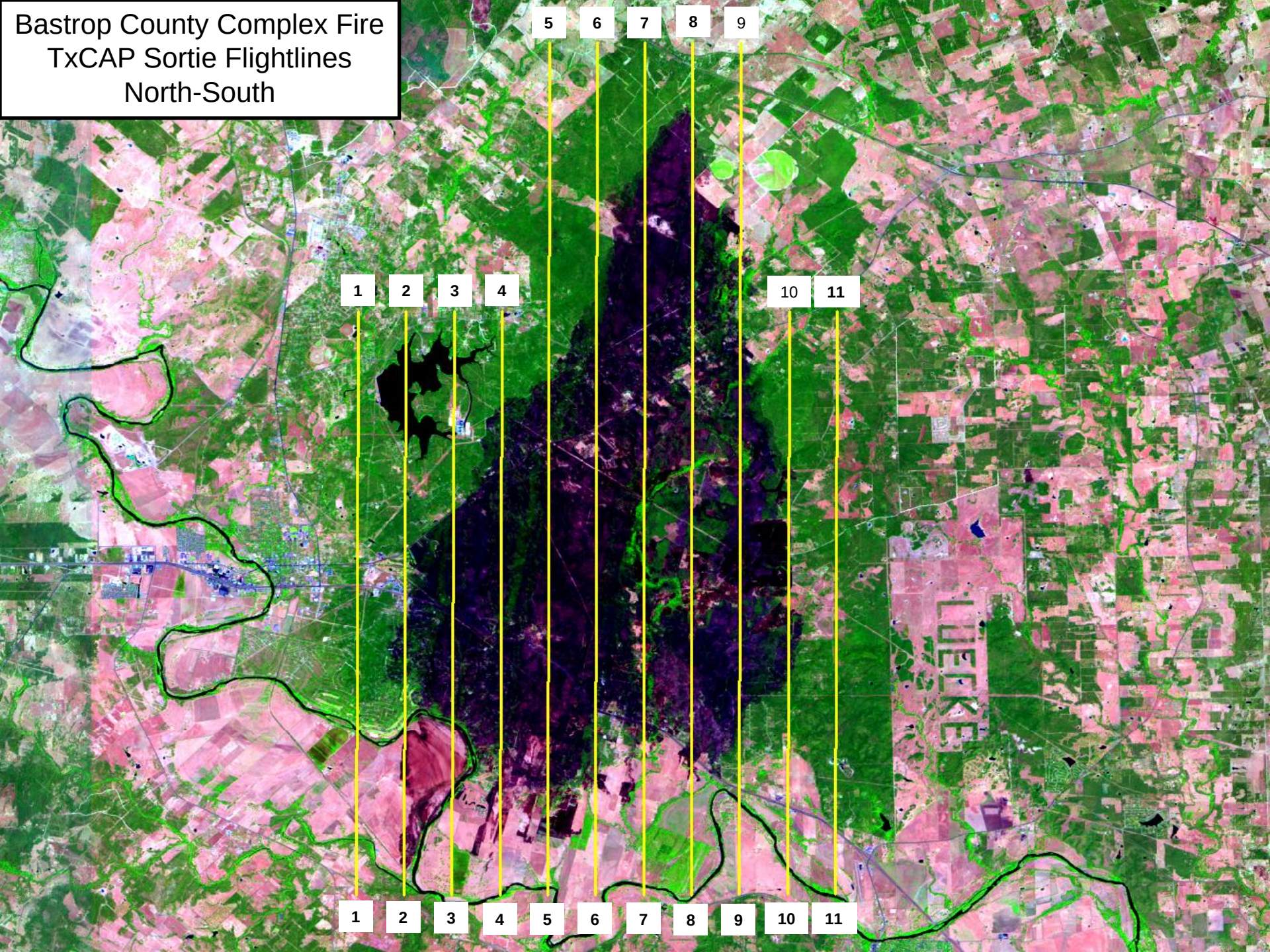
Therefore, fixing an unchanging shutter speed at 1/1000 second should be the starting point.

To provide sufficient exposure latitude for use with a fast shutter speed, fix the ISO speed rating at 200.

Set the camera to Auto Exposure Mode with Shutter Priority and let the aperture settings auto-adjust to control the amount of light reaching the detector.

On brightly sunlit days over dark targets, the aperture setting may dip into the f/3.5-f/8 range, but most targets will be photographed in the f/8-f/16 range.

The combination of fast shutter speed and narrow aperture settings will produce the sharpest feature contrast in aerial imagery.


Bastrop County Complex Fire
TxCAP Sortie Flightlines
North-South
5
6
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8
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1
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LUECKE
1
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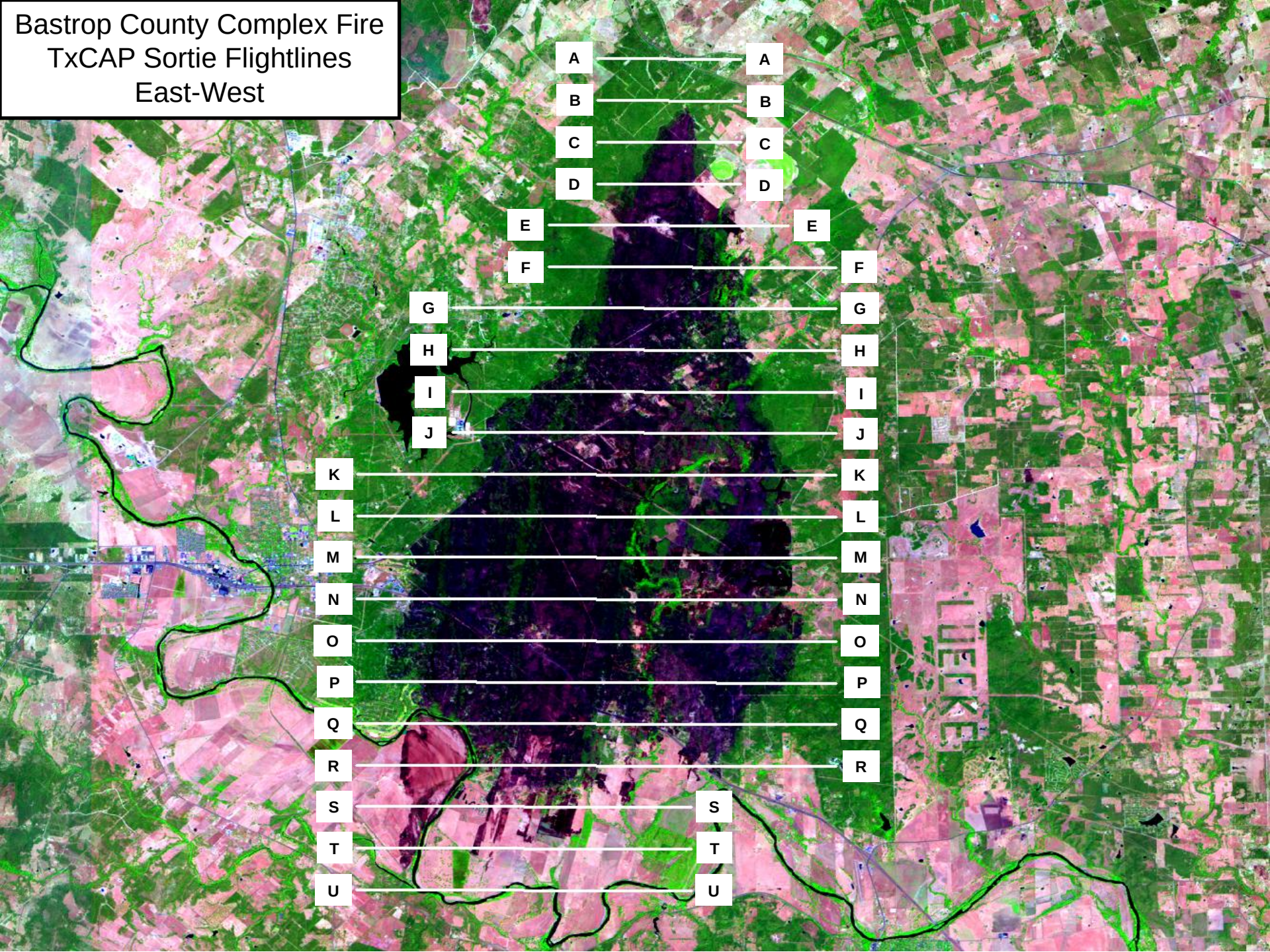
Bastrop County Complex Fire
TxCAP Sortie Flightlines
East-West
A
A
B
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LUFKE

Bastrop North - South Flightlines

Flightline	Start Lon (North)	Start Lat (North)	Finish Lon (South)	Finish Lat (South)
1	97D 17.82M	30D 10.62M	97D 17.82M	30D 1.50M
2	97D 17.10M	30D 10.62M	97D 17.10M	30D 1.50M
3	97D 16.38M	30D 10.62M	97D 16.38M	30D 1.50M
4	97D 15.66M	30D 10.62M	97D 15.66M	30D 1.50M
5	97D 14.88M	30D 14.82M	97D 14.88M	30D 1.50M
6	97D 14.16M	30D 14.82M	97D 14.16M	30D 1.50M
7	97D 13.38M	30D 14.82M	97D 13.38M	30D 1.50M
8	97D 12.66M	30D 14.82M	97D 12.66M	30D 1.50M
9	97D 11.88M	30D 14.82M	97D 11.88M	30D 1.50M
10	97D 11.16M	30D 10.62M	97D 11.16M	30D 1.50M
11	97D 10.38M	30D 10.62M	97D 10.38M	30D 1.50M

Bastrop East - West Flightlines

Flightline	Start Lon (West)	Start Lat (West)	Finish Lon (East)	Finish Lat (East)
A	97D 14.16M	30D 14.58M	97D 11.88M	30D 14.58M
B	97D 14.16M	30D 13.92M	97D 11.88M	30D 13.92M
C	97D 14.16M	30D 13.26M	97D 11.88M	30D 13.26M
D	97D 14.16M	30D 12.60M	97D 11.88M	30D 12.60M
E	97D 14.82M	30D 11.94M	97D 11.10M	30D 11.94M
F	97D 14.82M	30D 11.28M	97D 10.38M	30D 11.28M
G	97D 16.38M	30D 10.62M	97D 10.38M	30D 10.62M
H	97D 16.38M	30D 09.96M	97D 10.38M	30D 09.96M
I	97D 16.38M	30D 09.30M	97D 10.38M	30D 09.30M
J	97D 16.38M	30D 08.64M	97D 10.38M	30D 08.64M
K	97D 17.82M	30D 07.98M	97D 10.38M	30D 07.98M
L	97D 17.82M	30D 07.38M	97D 10.38M	30D 07.38M
M	97D 17.82M	30D 06.78M	97D 10.38M	30D 06.78M
N	97D 17.82M	30D 06.12M	97D 10.38M	30D 06.12M
O	97D 17.82M	30D 05.46M	97D 10.38M	30D 05.46M
P	97D 17.82M	30D 04.80M	97D 10.38M	30D 04.80M
Q	97D 17.82M	30D 04.14M	97D 10.38M	30D 04.14M
R	97D 17.82M	30D 03.48M	97D 10.38M	30D 03.48M
S	97D 17.82M	30D 02.82M	97D 12.66M	30D 02.82M
T	97D 17.82M	30D 02.22M	97D 12.66M	30D 02.22M
U	97D 17.82M	30D 01.50M	97D 12.66M	30D 01.50M

Geotagged Image Collection Summary

Acquire low-oblique, overlapping photos that do not include the horizon. Excellent examples are included in the following pages.

Collect images along the outbound leg and the inbound leg of each flightline before moving to the next flightline in the sequence.

Do not dwell on particular features during the initial overflights. The objective is to acquire as much comprehensive coverage as possible. We may want you to return to photograph particular features during a later flight.

Attempt to collect images that include the same areas and features under different illumination conditions by flying during different times of the day.

Ensure that your GPS unit is writing location records to the EXIF tags of your exposures. We will need to re-fly areas, if groups of images do not have embedded GPS tags.

Take your time. We have four days and at least eight sorties to accomplish the objectives. Each day we will plot your geolocated images and assess the quality of the exposures.

Gap areas and areas that are obscured by poor visibility and shadows will be reflown until adequate images are collected.

Please give me feedback if any of the collection procedures are unclear or if you have ideas about how to obtain better imagery through different techniques: gwells@csr.utexas.edu

Very good low oblique view of damaged structures under excellent illumination conditions.

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Good observation of a persistent hotspot surrounded by unburned fuel.